

Abstract of the Disclosure

A semiconductor device includes a conductive region, a conductive line, and a contact plug electrically connecting the conductive line to the conductive region. The conductive line is electrically connected to the conductive region via the sidewalls of the contact plug and the conductive region is electrically connected to the conductive line via the bottom of the contact plug. The cross-sectional area of the contact plug decreases in a direction from the upper portion of the contact plug to the lower portion thereof. In a method of fabricating a semiconductor device having a self-aligned contact, the contact plug is formed after the conductive line is formed. In a first method, a conductive line is formed in an interlayer dielectric layer. Portions of the interlayer dielectric layer and conductive line are etched to form a contact hole in which the contact plug is formed. In a second method, a conductive line having a gap therein is formed in an interlayer dielectric layer. Portions of the interlayer dielectric layer, including that occupying the gap in the conductive line, are etched to form the contact hole.

CONFIDENTIAL INFORMATION